

SEARCH STRATEGY INSTRUCTION



**SHIFTING
FROM BABY
BIRD SYNDROME
TO CURIOUS CAT
CRITICAL THINKING**

Lisa Cheby

lec2937@gmail.com

What's the Problem?

A colleague once described her frustration with students' lack of initiative and curiosity as what we came to call "baby bird syndrome": the desire of students, after years of teaching-to-the-test mentality, to wait to be fed answers rather than risk engaging in individual thinking. And it wasn't just us feeling tired and complaining at the end of a long day. Surveys of high school and college students show they lack basic research and critical-thinking skills (Maniotes and Kuhlthau 2014; Katz 2007; MacGregor and McInnis 1977). In 2007 a report from the Education Testing Service (ETS) found that students' know-how in using technology for entertainment did not translate into critical-thinking skills needed for the level of information literacy and research required for success in academics (Katz 2007, 35). For example, only 35 percent of the students in the study could accurately narrow a search that was too broad, and only 50 percent could apply strategies to refine searches in large databases (Katz 2007, 36). In addition to the basic research skills the ETS survey found lacking, Leslie K. Maniotes and Carol C. Kuhlthau recently cited a 2010 survey by Jean Donham, noting how college students lacked the ability to initiate inquiry, to cite

evidence properly, and to display "curiosity, open-mindedness, self-reliance, and perseverance" (2014, 15). Is it possible to teach curiosity, to make curious kittens out of baby birds?

Why So Much Focus on Product, Not Process?

Like Maniotes and Kuhlthau, Debbie Abilock (2015) has advocated for a new pedagogy around research that focuses on process rather than product. The traditional way of teaching research often lacks actual information-literacy instruction and, thus, fails to teach students how to be independent researchers. Traditional research instruction usually consists of providing a topic and a list of requirements followed by the briefest of explanations on how to use library resources to find the required information (Maniotes and Kuhlthau 2014, 9). Maniotes and Kuhlthau noted one reason may be that the research process is not covered in most teacher education programs; as a result, teachers fail to allow time for students to engage in the natural research process of identifying "a clear question to pursue" and exploring that question to the development of a thesis (2014, 9). The other reason is simply time. I must negotiate with teachers at

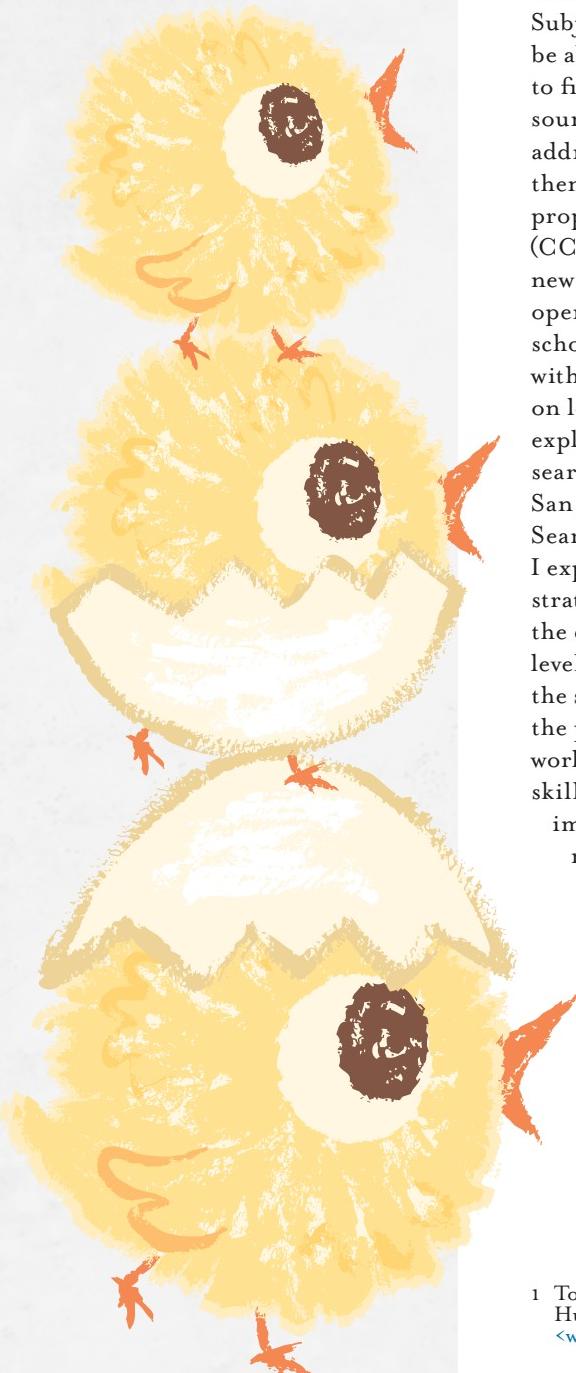
my school to give me more than ten minutes to teach research strategies. The result is a paper in which students simply assemble some quotes and facts they scrambled together to complete the page and citation requirements (Maniotes and Kuhlthau 2014, 10).

This is not a new problem. As far back as 1977, John MacGregor and Raymond G. McInnis observed the frustration students and instructors face as they try to keep up with content requirements as knowledge changes rapidly due to advancements in technology and the dissemination of information (1977, 19). Only through shifting the focus from answer-finding to inquiry may students "discover real questions about academic topics" that may then "blossom into research" (Maniotes and Kuhlthau 2014, 11).

What Can We Do?

From my perspective as a high school English teacher and then school librarian, I have identified a key element of the inquiry process that is rarely taught in depth: how to develop search strategies. Though being able to support ideas with evidence was always part of English language arts writing standards, the Common

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Core State Standards (CCSS), a set of national standards intended to—among other goals—address the information-literacy gap among our youth, have broadened our remit. The authors of the CCSS have singled out information-literacy skills as the focus of standards to be included in all subjects. For example, Standard 8 for Writing for Literacy in History/Social Studies, Science, and Technical Subjects 6–12 expects students to be able to use advanced searches to find relevant and credible sources in a variety of formats to address research questions and then to use the evidence found in properly formatted presentations (CCSS Initiative 2014, 46). This new emphasis on search strategies opens up the opportunity for school librarians to collaborate with departments and teachers on lessons to teach these skills explicitly. After deepening my own search strategy skills in a course at San Jose State University, Online Searching with Dr. Virginia Tucker, I experienced how teaching search strategies is essential to developing the dispositions students lack: high-level questioning, an awareness of the structure of knowledge, and the perseverance and motivation to work through failures. All of these skills are required to develop and implement a search strategy and must be practiced by students to prepare them for college and careers.

Conducting a strategic search starts with being able to formulate a genuine question (which may be different than the final thesis). In an article for *Salon*, Ian Leslie wrote how search engines, par-

ticularly Google, have led to a decline in our ability to ask good questions as “the gap between a question crystallizing in your mind and an answer appearing at the top of your screen” continues to shrink (2014). We may help students regain curiosity by guiding them to shift their idea of research from a fact-finding and presentation exercise to a process of inquiry that includes gathering and analyzing evidence, formulating new understandings, and reflecting on the evidence and understandings to share the result of their inquiry (Abilock 2015, 28). Teachers may facilitate this shift by redesigning research assignments from “retrieval questions” to “essential questions” (Abilock 2015, 28).

Example of Successful Approach

Essential questions ask students to engage with the language of the question, to work to clarify and focus their questions, and to consider the breadth of information needed to fulfill their curiosity (Abilock 2015, 28). For example, this semester I worked with an English teacher at my school, Karyn Buchanan, to teach search strategies to seniors working on an interdisciplinary project designed and implemented by teachers from several disciplines working collaboratively as a Humanitas team.¹ The prompt instructs students to write an essay that explores how economics, history, and family relationships influence individual success in the August Wilson play *Fences*, which takes place in the 1950s, and to compare these influences in the 1950s to the role of economics, history, and family relationships in individual success today. Students must first comprehend the prompt’s

¹ To learn more about interdisciplinary Humanitas programs, go to www.ascd.org/ASCD/pdf/journals/ed_lead/el_199110_aschbacher.pdf.

key concepts: economics, history, and family relationships, and their connection to individual success. Next, students must be able to recognize that the prompt invites them to examine this question through both the content of the courses (in this case Economics, American Government, and 12th-grade English) and the world today. Students must then consider the historical content learned as well as the characters and actions in the play to formulate a specific question or hypothesis to pursue. Finally, students must figure out what kinds of information they must seek (and find!) to connect these elements and gather enough evidence to prove or disprove their hypotheses.

Through the creation of a concept map to plan search queries, students may work through these steps, developing a deeper level of engagement with their topics by categorizing terms by concepts and organizing how those concepts

may be connected in a query. I advise students to create an initial search statement and then to choose three main concepts to begin. For example, they may ask "How did economics, history, and family relationships influence individual success for African Americans in the 1950s?" From this starting point, students might place three concepts from this statement into a concept chart like the one below

that I adapted from one used in Dr. Tucker's course.

Next, students will brainstorm other terms to express these ideas, maybe narrowing or maybe broadening the concepts. In doing so, they may activate knowledge they know something about and begin to refine and deepen their inquiry, even if just within the chart, so that it may look something like this:

	CONCEPT 1	CONCEPT 2	CONCEPT 3
↑↑ OR ↓↓	African Americans	Economics	Segregation

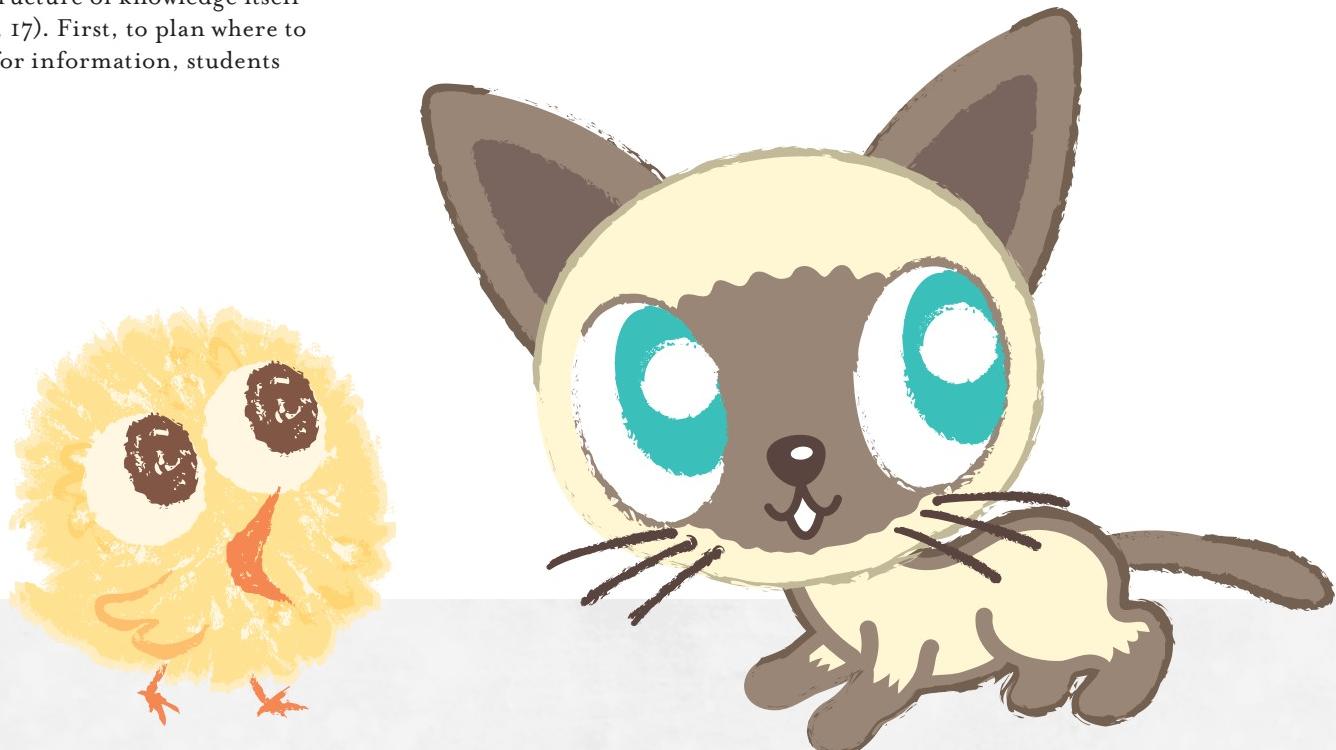
	CONCEPT 1	CONCEPT 2	CONCEPT 3
↑↑ OR ↓↓	African Americans	Economics	Segregation
	Blacks	Employment	Discrimination
	Black Americans	Work	Jim Crow
		Jobs	
		Education	

The operators above and to the left indicate to students how search terms may be combined in a query, such as: "African Americans" AND (Jobs OR Employment) AND "Jim Crow." Obviously, with this assignment, students may have more than one concept chart, indicating the need for multiple searches to cover all the perspectives required by the assignment. Though focused on a play and a certain time period, the request to discuss how that world parallels—or diverges from—today's world allows for students to bring in their own interests and curiosities.

Once students engage in high-level questioning and have a plan for something they genuinely want to explore, they will need to develop an understanding of the structure of knowledge and apply it to their searches. MacGregor and McInnis advocated for bibliographic instruction, equivalent today to instruction in online databases and search engines, to develop cognitive skills by extending the practice of analyzing structure within informational texts to analyzing the structure of knowledge itself (1977, 17). First, to plan where to look for information, students

need to be taught the differences in the structure, content, and purposes of possible resources such as encyclopedias, directories, and scholarly databases (MacGregor and McInnis 1977, 18). Additionally, once key concepts are identified, students must be able to find related terms in case they need to expand or narrow searches and to notice how vocabulary may vary between natural terms and subject-specific or academic terminology. Finally, there is the grammar of searching—Boolean operators, fields, and other limiters—to indicate the relationships between the terms they are searching to best retrieve what they seek (Tenopir 2001, 35). By explicitly teaching and assessing these concepts, students will be able to strategically plan how and where to look for information rather than simply relying on Google and using whatever shows up first because they do not know how to recognize sources that aren't authoritative or do not know how to control their searches to yield more-relevant results.

Finally, by making research assignments more about the process than the final product, about the exploration of essential questions rather than retrieving an answer (Abilock 2015, 28), room may be allowed for uncertainty, failure, and rerouting in the search process. Even as we watch cats in their curiosity, we see it is the activity—not the acquisition of the object of their curiosity—that gives the cats (and us) pleasure and purpose. Likewise it is the experience—of searching, of finding connections, of discovering and creating new knowledge—that we need to teach our students (Kuhlthau 1990, 72). Placing this emphasis on *process* is difficult to do in an educational system driven by the timelines of tests because "inquiry takes time, reflection, and persistence" (Maniotes and Kuhlthau 2014, 12). We must design units that allow us to guide, encourage, and re-strategize with students when their plans flounder or fail and they must start over. For students to feel confident pursuing their curiosities, time must be



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allowed for direct instruction in the process of discovery because engagement with the research must take place before a truly authentic thesis can be formulated (Maniotes and Kuhlthau 2014, 10). Therefore, a shift in evaluating students on their search strategy skills, not just the final product, is also needed. Throughout the assignment, we must let them know research does not have to be a lone process; asking for help from experts or peers can help refine a search or get a search back on track. In short, we must allow learners to engage fully in the process.

Persistence and Collaborative Instruction

Making this shift not only requires persistence of our students but also of the teachers. It is often much easier for us to just feed our baby birds the knowledge the tests tell us they should have, but, of course, easiest isn't best. Students deserve a team effort between teachers from all departments and school librarians to include strategies for searching and inquiry-based research assignments in all classes across all grade levels. Only then will students build confidence as information searchers, both as students and as citizens. Moreover, the rewards for all will be seen in the products as research shows students who received information-literacy instruction use more-relevant and properly cited evidence in their assignments (MacGregor and McInnis 1977, 33; Landrum and Muench 1994,

1620; Fuselier and Nelson 2011, 68–70). MacGregor and McInnis's conclusions about the benefits of teaching information-literacy skills and using inquiry models are as relevant and true now as they were in 1977; teaching these skills brings "greater interest," "greater engagement," and the experience of "what a researcher does" (1977, 19). My best teaching occurs when I am able to incorporate into my units something about which I am genuinely passionate and curious and want to share with others so I can learn what others think about the topic. The best assignments I've had to grade were the ones for which students were allowed to do the same and include something of themselves in the assignment. By teaching students how to search strategically for the purpose of pursuing authentic inquiries and by shifting focus to the process rather than a page and citation count, we may give students skills to be effective information-seekers beyond one particular assignment and reignite their curiosity.



Lisa Cheby is a school librarian and MLIS candidate at San Jose State University. She was awarded both the Robert Ellett Scholarship and the SLIS Alumni and Friends Scholarship.

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